

University of Montana

ScholarWorks at University of Montana

Institute for Tourism and Recreation Research
Publications

Institute for Tourism and Recreation Research

10-1-2012

Geotraveler Tendencies in Montana's Shoulder and Winter Seasons

Christine Oschell

The University of Montana-Missoula

Follow this and additional works at: https://scholarworks.umt.edu/itr_pubs



Part of the [Economics Commons](#), [Leisure Studies Commons](#), [Recreation, Parks and Tourism Administration Commons](#), and the [Tourism and Travel Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Oschell, Christine, "Geotraveler Tendencies in Montana's Shoulder and Winter Seasons " (2012). *Institute for Tourism and Recreation Research Publications*. 184.
https://scholarworks.umt.edu/itr_pubs/184

This Report is brought to you for free and open access by the Institute for Tourism and Recreation Research at ScholarWorks at University of Montana. It has been accepted for inclusion in Institute for Tourism and Recreation Research Publications by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.



College of Forestry & Conservation Phone (406) 243-5686
32 Campus Dr. #1234 Fax (406) 243-4845
The University of Montana www.itrr.umt.edu
Missoula, MT 59812

Geotraveler Tendencies in Montana's Shoulder and Winter Season

Prepared by:

Christine Oschell, Ph.D.

Institute for Tourism & Recreation Research
College of Forestry and Conservation
The University of Montana
Missoula, MT 59812
www.itrr.umt.edu

Research Report 2012-7

October 2012

Copyright © 2012 Institute for Tourism and Recreation Research. All rights reserved.

This study was funded by the Montana Lodging Facility Use Tax

Executive Summary

Geotourism is an integrated form of sustainable tourism aimed at maintaining and enhancing the geographical character of a destination by focusing upon multiple aspects of the travel experience (Stokes, Cook, & Drew, 2003). After two initial studies on geotourism in Montana (Boley, 2009; Boyle, 2012) confirmed the presence of geotravelers in the third quarter of both the Crown of the Continent region and throughout the state of Montana, research interest turned to visitors during the remainder of the quarters or seasons. This study looked statewide at all visitors and, more narrowly, vacationers, in the “shoulder” and winter season (quarters 1, 2, 4) to determine their geotourist tendencies.

- On all dimensions (aesthetic, environment, culture and heritage, and wellbeing of locals) shoulder and winter season and third quarter vacationers had higher geotourism scores than the full sample of shoulder and winter season visitors.
- When comparing the two sets of vacationers, the shoulder and winter season vacationer had a higher likelihood to visit museums, cultural sites, and cultural events.
- Quarter three vacationers were more likely to visit historic sites and national parks.
- Vacationers in the shoulder and winter season were more likely to seek out local accommodations, local food, and local arts and crafts. Also, in their daily living, the vacationers who came to Montana during these months were more likely to choose a form of transportation other than their personal vehicle; conserve water and energy; and purchase environmentally friendly products.
- Average geotourism scores for all respondents in this study ranged from 1.50 to 5.85 (scale of 1-6). The largest number of respondents can be considered moderate geotravelers. Twenty-four percent are strong geotravelers and 23 percent are considered non-geotravelers with a score of less than 3.75.
- The largest number of vacationer respondents fall into the moderate geotraveler category (53%). Thirty percent of respondents are considered strong geotravelers, while 17 percent are non-geotravelers. The percentage of strong geotravelers in the shoulder and winter season is lower than the percentage found in the third quarter vacationer study done previously (30% to 34% respectively).
- Clean air and water are both the most important attributes to all sets of respondents. Scenic vistas, wildlife viewing opportunities, and the amount of open space were all high in importance as well. Public transportation, box stores, and shopping malls were not very important to these visitors.
- Strong geotravelers, of both the full sample and vacationers, had the highest total mean expenditures at \$176.12 and \$192.54.

Table of Contents

Executive Summary	i
Table of Contents	ii
Tables and Figures	iii
Introduction.....	4
Methods.....	4
Results.....	4
Travel Behavior	7
Segmenting by Geotourism Tendency.....	11
Importance Attributes	11
Expenditures	13
Conclusions.....	15
Literature Cited	17
Appendix A: Survey Instrument	17

Tables and Figures

Table 1: Shoulder and Winter Season Visitor Demographic Information.....	5
Table 2: Shoulder and Winter Season Visitor Trip Characteristics.....	5
Table 3: Shoulder and Winter Season Vacationer Demographics.....	6
Table 4: Shoulder and Winter Season Vacationer Trip Characteristics	7
Table 5: Mean Score Comparisons	8
Table 6: Culture and Heritage Behavioral Tendencies Compared	8
Table 7: Aesthetics Behavioral Tendencies Compared	9
Table 8: Local Well-Being Behavioral Tendencies Compared	10
Table 9: Environmental Behavioral Tendencies Compared	10
Table 10: Segmenting All Shoulder/Winter Visitors into Geotourism Groups.....	11
Table 11: Segmenting Vacationing Shoulder and Winter Season Visitors into Geotourism Groups.....	11
Table 12: Comparing the Importance of Attributes when Traveling in Montana	12
Table 13: Expenditures of Shoulder and Winter Season Visitors by Geotraveler Segments	13
Table 14: Expenditures of Shoulder and Winter Season Vacationers by Geotraveler Segments.	14
Table 15: Expenditures of Quarter Three Vacationers by Geotraveler Segments.....	15

Introduction

Geotourism is tourism focused on “sustaining and enhancing the geographical character of a destination while providing an authentic travel experience” (Stokes, et al., 2003). Montana has embraced the concept of geotourism and research projects have been completed to measure the tendencies of visitors to behave as geotravelers (Boley, 2009; Boyle, 2010). In reports detailing results of both studies, it has been found that there are visitors who can be identified as geotravelers in the Crown of the Continent area¹ and state-wide in Montana during the third quarter² (July through September). Both of these studies focused on people who indicated vacation as one of the purposes for their trip to Montana during these time periods.

The purpose of this study was to investigate whether visitors, and specifically vacationers, in the shoulder and winter seasons (October through June or quarters 1, 2, and 4) have geotraveler tendencies measured by looking at their behavior and the attributes they find important. In addition, this study looked at the expenditure patterns of all visitors and specifically vacationers. Expenditures were analyzed by visitor’s level of geotouristic tendencies.

Methods

Nine surveyors were stationed around Montana intercepting visitors for an on-going quarterly non-resident visitor study. These surveyors collected some data on-site, including expenditure information. They also handed nonresidents the geotourism questionnaire in a self-addressed envelope to be completed at their convenience following their trip to Montana. Data collection started October 1, 2011 and ended on June 30, 2012. Visitors were given the option to fill out the enclosed paper survey or to go on-line and complete the survey in that manner.

Results

Data collection yielded 1,341 completed surveys (mail and web). Table 1 details some key demographics of all shoulder and winter season visitors. Eleven percent of respondents indicated the state of Washington as their permanent residence followed by Idaho at ten percent, Alberta, Canada at nine percent and California, Minnesota, Utah, and Wyoming at five percent each. Forty-seven percent of respondents make \$75,000 or less while thirty-three percent make more than \$100,000 a year (Table 1). The majority of respondents had at least some college experience with 30 percent earning a bachelor’s degree. The average age of respondents was almost 55 years.

¹ <http://www.itrr.umt.edu/research09/GeotourismInCoCRR2009-1.pdf>

² http://www.itrr.umt.edu/research10/StatewideGeotourismRR2010_2.pdf

Table 1: Shoulder and Winter Season Visitor Demographic Information

N=1,341			
<u>Visitor Residence</u>		<u>Household Income</u>	
11%	WA	24%	< \$50,000
10%	ID	23%	\$50K –\$75K
9%	Alberta, Canada	19%	\$75K –\$100K
5%	CA, MN, UT, WY	19%	\$100K - \$150K
4%	CO	6%	\$150K- \$200K
3%	ND, OR	8%	> \$200,000
2%	TX, WI	<u>Level of Education</u>	
1%	GA, IL, IN, IA, KS, KY, MI, NC, OH, PA, SD, VA	1%	Some high school
		12%	High school/GED
>1%	ME, MD, MO, NB, NV, NH, NJ, NM, NY, OK, SC, TN	23%	Some college
		10%	Associates Degree
Canada		30%	Bachelor's Degree
9%	Alberta	18%	Master's Degree
1%	British Columbia, Ontario, Saskatchewan	7%	
>1%	Manitoba, Newfoundland, Quebec	Average Age: 54.62 years	
Overseas			
1% Australia, Belgium, Denmark, England, Finland, Germany, Norway, Switzerland		51% Male respondents	
		49% Female Respondents	

Table 2 presents trip characteristics of the shoulder and winter season visitor. Thirty-three percent indicated that they were primarily in Montana just to pass through the state followed closely by those on vacation and those visiting friends and relatives (both 25%). The average group size was just over two people and on average they stayed four and a half nights in the state. The majority (73%) arrived in Montana by automobile or truck, followed by 20 percent who arrived via air. Forty-two percent of these visitors were couples and 31 percent were by themselves. Eighty-eight percent of respondents indicated that they are repeat visitors to Montana.

Table 2: Shoulder and Winter Season Visitor Trip Characteristics

N=1,341					
<u>Purposes of Trip</u>		<u>Travel Party</u>		<u>Ava. nights in MT</u>	
35%	Vacation	42%	Couple	4.5 nights	
32%	Just passing through	31%	Self	<u>Have you ever visited MT?</u>	
28%	Visit friends & family	19%	Immediate family	88%	Yes
		4%	Friends	12%	No
14%	Business	2%	Family & friends		
8%	Shopping	1%	Extended family	<u>How did you enter MT?</u>	
4%	Other	<1%	Organized group or club	73%	Auto/Truck
		<1%	Business Associates	20%	Air
<u>Primary purpose of trip</u>		<u>Ava. travel group size</u>		6%	RV/Trailer
33%	Just passing through				
25%	Vacation	2.1 people		1%	Motorcycle
25%	Visit friends & family			1%	Other
13%	Business				
4%	Other			<1%	Train
1%	Shopping				

The data was broken down further to look at just those who indicated that one of the purposes of their trip to Montana was vacation (470 respondents or 35% of total). Table 3 presents their demographics. Ten percent of respondents indicated the state of Washington as their permanent residence followed by California and Minnesota at eight percent each. Six percent were from Alberta, Canada and Idaho, followed by five percent from Colorado and Wyoming. Forty-four percent of respondents make \$75,000 or less while 37 percent make more than \$100,000 a year (Table 3). The majority of respondents had at least some college experience with 33 percent earning a bachelor's degree. The average age of respondents was almost 54 years.

Table 3: Shoulder and Winter Season Vacationer Demographics

N=470			
Visitor Residence		Household Income	
10%	WA	25%	< \$50,000
8%	CA, MN	19%	\$50K-\$75K
6%	Alberta, Canada; ID,	19%	\$75K-\$100K
5%	WY, CO	17%	\$100K - \$150K
4%	AZ	8%	\$150K-\$200K
3%	FL, IL, ND, TX, UT, WI	12%	> \$200,000
2%	AK, GA, NC, OR, PA, VA		
		Level of Education	
Canada		1%	Some high school
6%	Alberta	12%	High school/GED
1%	British Columbia, Ontario, Saskatchewan	20%	Some college
Overseas		11%	Associates Degree
		33%	Bachelor's Degree
1%	Australia, Switzerland	18%	Master's Degree
Average Age: 53.90 years		6%	Ph.D. or Professional
50% Male respondents			
50% Female Respondents			

Table 4 presents trip characteristics of the shoulder and winter season vacationer. Sixty-three percent indicated that they were primarily in Montana for vacation followed by those visiting friends and relatives (21%). The average group size was just over two people and on average they stayed just over six nights in the state. The majority (66%) arrived in Montana by automobile or truck, followed by 23 percent who arrived via air. Forty-three percent of these visitors were couples and 24 percent were with immediate family. Eighty-three percent of respondents indicated that they are repeat visitors to Montana.

Table 4: Shoulder and Winter Season Vacationer Trip Characteristics

N=470				
<u>Purposes of Trip</u>		<u>Travel Party</u>		<u>Avg. travel group size</u>
100%	Vacation	43%	Couple	2.2 people
28%	Visit friends & family	24%	Immediate family	
14%	Just passing through	22%	Self	<u>Avg. nights in MT</u>
		8%	Friends	6.2 nights
14%	Shopping	2%	Family & friends	
5%	Business	2%	Extended family	
3%	Other	<1%	Organized group or club	<u>Have you ever visited MT?</u>
		<1%	Business Associates	83% Yes
<u>Main purpose of trip</u>		<u>How did you enter MT?</u>		17% No
63%	Vacation	66%	Auto/Truck	
21%	Visit friends & family	23%	Air	
10%	Just passing through	7%	RV/Trailer	
3%	Business	2%	Motorcycle	
2%	Other	2%	Other	
1%	Shopping	<1%	Train	

Travel Behavior

To identify visitors as geotravelers, it is necessary to look at their behaviors. Boley (2009) created and tested an instrument to measure the tendency of visitors to behave in a geotouristic manner. Means of the four dimensions of geotourism (aesthetics, cultural heritage, environment, and well-being of local people) are presented in Table 5 along with a total geotraveler score. All shoulder and winter season visitors are compared with shoulder and winter season vacationers, as well as with data from third quarter vacationers. On all dimensions, vacationers in both the shoulder and winter season and in the third quarter had higher geotourism scores than the full sample of shoulder and winter season visitors. When comparing vacationers from the summer months to those in the shoulder and winter seasons, one can see that the scores are very close together. The environmental dimension, the culture and heritage dimension, and the average scores are equal.

Table 5: Mean Score Comparisons

Dimensions of Geotourism	All Respondents (N=1,352)	Vacationer Respondents (N= 470)	Q3 Vacationer Respondents (N=284)
Aesthetic behavior	4.7	4.9	5.1
Environmental behavior	4.5	4.5	4.5
Culture heritage behavior	4.3	4.4	4.4
Well being of the local people behavior	3.4	3.5	3.8
<i>Average of all geotourism scales</i>	<i>4.2</i>	<i>4.4</i>	<i>4.4</i>

Scale: 1= not a geotraveler (not at all likely) and 6= perfect geotraveler (very likely)

Tables 6 through 9 present specific behavioral aspects which make up the dimensions of geotourism. The shoulder and winter season visitors (both all and vacationers only) are compared along with the results from the previous study showing quarter 3 vacationers. Vacationers, no matter the season, had the highest mean response on all items except two: franchise accommodations and franchise restaurants. Importantly, these two items would be low for someone who has geotraveler tendencies so the high mean actually corresponds with not being a geotraveler.

When comparing the two sets of vacationers, the shoulder and winter season visitors had a higher likelihood to visit museums, cultural sites, and cultural events (Table 6). Quarter three vacationers were more likely to visit historic sites and national parks.

Table 6: Culture and Heritage Behavioral Tendencies Compared

How likely are you to visit....	Comparison	Mean
Historic Sites	All shoulder and inter season visitors	4.50
	Vacationer shoulder and winter season	4.64
	Q3 Vacationers	4.65
Museums	All shoulder and winter season visitors	4.04
	Vacationer shoulder and winter season	4.20
	Q3 Vacationers	4.12
Cultural Sites	All shoulder and winter season visitors	4.00
	Vacationer shoulder and winter season	4.11
	Q3 Vacationers	3.99
Cultural Events	All shoulder and winter season visitors	3.70
	Vacationer shoulder and winter season	3.76
	Q3 Vacationers	3.62
National Parks	All shoulder and winter season visitors	5.15
	Vacationer shoulder and winter season	5.31
	Q3 Vacationers	5.49

*bold print=highest mean ; **Scale: 1=not a geotraveler (not at all likely) and 6=perfect geotraveler (very likely)

Shoulder and winter season vacationers had a slightly higher likelihood of participating in outdoor activities while quarter three vacationers were more likely to do the other four aspects of the aesthetics dimension (Table 7).

Table 7: Aesthetics Behavioral Tendencies Compared

How likely are you to....	Comparison	Mean
Specifically travel to an area for its scenic beauty	All shoulder and winter season visitors	4.90
	Vacationer shoulder and winter season	5.16
	Q3 Vacationers	5.37
Stop at scenic overlooks	All shoulder and winter season visitors	4.74
	Vacationer shoulder and winter season	4.90
	Q3 Vacationers	4.98
Search for scenic driving routes	All shoulder and winter season visitors	4.57
	Vacationer shoulder and winter season	4.79
	Q3 Vacationers	4.86
Plan vacation around the opportunity to enjoy scenic beauty	All shoulder and winter season visitors	4.69
	Vacationer shoulder and winter season	4.89
	Q3 Vacationers	5.15
Participate in outdoor recreation activities	All shoulder and winter season visitors	4.52
	Vacationer shoulder and winter season	4.77
	Q3 Vacationers	4.68

*bold print=highest mean

**Scale: 1=not a geotraveler (not at all likely) and 6=perfect geotraveler (very likely)

Vacationers in the shoulder and winter seasons are more likely to seek out local accommodations, local food, and local arts and crafts (Table 8). Also, in their daily living, the vacationers who came to Montana in the shoulder and winter seasons were more likely to choose a form of transportation other than their personal vehicle; were more likely to conserve water and energy, and purchase environmentally friendly products (Table 9).

Table 8: Local Well-Being Behavioral Tendencies Compared

How likely are you to seek out....	Comparison	Mean
Locally owned accommodations	All shoulder and winter season visitors	3.99
	Vacationer shoulder and winter season	4.21
	Q3 Vacationers	4.03
Locally grown food	All shoulder and winter season visitors	4.11
	Vacationer shoulder and winter season	4.25
	Q3 Vacationers	4.18
Locally made arts and crafts	All shoulder and winter season visitors	4.19
	Vacationer shoulder and winter season	4.34
	Q3 Vacationers	4.21
Franchise hotels	All shoulder and winter season visitors	4.71
	Vacationer shoulder and winter season	4.62
	Q3 Vacationers	3.87
Franchise restaurants	All shoulder and winter season visitors	4.59
	Vacationer shoulder and winter season	4.53
	Q3 Vacationers	3.58

*bold print=shoulder season is higher

**Scale: 1=not a geotraveler (not at all likely) and 6=perfect geotraveler (very likely)

Table 9: Environmental Behavioral Tendencies Compared

In your daily living, how likely are you to...	Comparison	Mean
Recycle	All shoulder and winter season visitors	5.08
	Vacationer shoulder and winter season	5.12
	Q3 Vacationers	5.15
Choose form of transportation other than your personal automobile	All shoulder and winter season visitors	3.13
	Vacationer shoulder and winter season	3.24
	Q3 Vacationers	3.00
Conserve Water	All off season visitors	4.76
	Vacationer shoulder and winter season	4.81
	Q3 Vacationers	4.67
Conserve Energy	All shoulder and winter season visitors	4.86
	Vacationer shoulder and winter season	4.90
	Q3 Vacationers	4.83
Purchase environmentally friendly products	All shoulder and winter season visitors	4.55
	Vacationer shoulder and winter season	4.61
	Q3 Vacationers	4.49

*bold print=shoulder season is higher

**Scale: 1=not a geotraveler (not at all likely) and 6=perfect geotraveler (very likely)

Segmenting by Geotourism Tendency

The thresholds for geotraveler behavior scores were proposed by Boley (2009) and will be used here. A strong geotraveler has an average score of 4.75 or above while a moderate geotraveler's score is between 4.74 and 3.76. Non-geotrailers have scores of 3.75 or less. Average geotourism scores for all respondents in this study ranged from 1.50 to 5.85. The largest number of respondents can be considered moderate geotrailers (Table 10). Twenty-four percent are strong geotrailers and 23 percent are considered non-geotrailers with a score of less than 3.75.

Table 10: Segmenting All Shoulder/Winter Visitors into Geotourism Groups

Group	N	% of total	Threshold of Travel Behavior Mean Scores
Strong geotraveler	277	24%	4.75 or above
Moderate geotraveler	606	53%	4.74 to 3.76
Non-geotraveler	266	23%	3.75 or below

*When calculating the mean score to segment geotrailers, a score could not be calculated for those who skipped questions. This resulted in 192 missing cases.

Table 11 shows that the largest number of vacationer respondents fall into the moderate geotraveler category at 53 percent. Thirty percent of respondents are considered strong geotrailers, while 17 percent are non-geotrailers. The percentage of strong geotrailers in the shoulder and winter season is lower than the percentage found in the third quarter vacationer study done previously (30% to 34% respectively).

Table 11: Segmenting Vacationing Shoulder and Winter Season Visitors into Geotourism Groups

Group	N	% of total	Threshold of Travel Behavior Mean Scores
Strong geotraveler	125	30%	4.75 or above
Moderate geotraveler	216	53%	4.74 to 3.76
Non-geotraveler	70	17%	3.75 or below

Importance Attributes

To understand the most important to least important geotouristic attributes to Montana's nonresident visitors, the average response to each importance question was calculated and is presented from the attribute with the highest importance to the attribute with least importance (Table 12). This is broken down by the same groups of visitors: all shoulder and winter season visitors, shoulder and winter season vacationers, and quarter three vacationers.

Clean air and water are both the most important attributes to all the sets of respondents. Scenic vistas, wildlife viewing opportunities, and the amount of open space were all high in importance as well. Public transportation, box stores, and shopping malls were not very important to these visitors.

Table 12: Comparing the Importance of Attributes when Traveling in Montana

While traveling in Montana, how important are the following attributes?	All Shoulder and Winter Mean Response	Shoulder and Winter Season Vacationer Mean Response	Q3 Mean Response
Clean waterways	5.2	5.3	5.5
Clean air	5.2	5.3	5.5
Scenic vistas	4.9	5.2	5.4
Wildlife viewing opportunities	4.9	5.1	5.4
Amount of open space	4.9	5.1	5.4
Opportunity to view the night sky	4.9	5.1	5.2
Access to public lands	4.7	5.0	5.2
Montana's land ethic	4.6	4.8	4.7
Access to waterways	4.6	4.9	5.0
Pedestrian friendly atmosphere	4.5	4.7	4.9
Environmental practices of accommodations	4.5	4.6	4.6
Main streets that reflect the local culture and heritage of the destination	4.4	4.6	4.7
Eating at restaurants where locals eat	4.4	4.5	4.7
Historical attractions	4.4	4.5	4.6
Locally owned restaurants	4.4	4.5	4.5
Paths for walking & biking	4.3	4.5	4.7
Restaurants serving local products	4.2	4.2	4.3
Visitors education on preserving the local environment	4.1	4.2	4.3
Availability of recycling bins	4.1	4.2	4.1
Availability of other MT made products	4.1	4.2	4.2
Availability of MT made arts & crafts	4.1	4.2	4.2
Local shops/boutiques	4.0	4.0	3.9
Visitor education on preserving the local culture	4.0	4.3	4.2
Native American history	4.0	4.0	4.1
Historical tours	4.0	4.0	4.0
Local accommodations	3.9	4.0	4.0
Franchise accommodations	3.7	3.5	3.6
Museums	3.7	3.8	3.8
Native American events	3.7	3.7	3.7
Farmers markets	3.6	3.6	3.4
Information regarding how businesses preserve and protect the local culture	3.6	3.7	3.6
Cultural events	3.6	3.6	3.4
Festivals	3.5	3.5	3.4
Local breweries	3.5	3.6	3.4
Franchise restaurants	3.4	3.2	3.4
Local guides	3.4	3.6	3.5
Opportunity to donate to MT environmental/conservation efforts	3.3	3.5	3.4
Art galleries	3.4	3.5	3.4
Performing arts	3.3	3.3	3.1
Public transportation	3.0	3.0	2.9
Shopping malls	3.0	2.8	2.6
Box stores	2.8	2.7	2.4

Expenditures

Another purpose of this study was to look at the expenditure patterns of the shoulder and winter season visitor by their geotourism tendency and to compare the patterns of expenditures among the groups of visitors. Table 13 presents the expenditure categories and the mean expenditures for each group of visitors by category. Strong geotravelers, both the full sample and vacationers, had the highest total mean expenditures at \$176.12 and \$192.54. When looking at the full sample (Table 13) one can see that expenditures trend down with geotourism tendency.

Table 13: Expenditures of Shoulder and Winter Season Visitors by Geotraveler Segments

	Strong Geotraveler* (n=277)	Moderate Geotraveler* (n=606)	Non- Geotraveler* (n=266)	All Shoulder Visitors* (n= 1,341)
Gas	\$45.68	\$48.84	\$53.29	\$49.28
Restaurant	\$33.32	\$24.18	\$22.37	\$25.73
Retail	\$31.83	\$31.39	\$25.47	\$28.89
Campgrounds, RV parks	\$1.19	\$1.08	\$1.36	\$1.21
Grocery, snacks	\$11.91	\$13.16	\$6.26	\$11.35
Hotel, motel, B&B,	\$37.74	\$31.55	\$30.34	\$31.59
Auto rental, repair	\$6.61	\$4.51	\$3.93	\$4.64
Licenses, entry fees, admissions	\$4.26	\$2.49	\$2.62	\$3.11
Misc. Services	\$0.74	\$0.26	\$0.26	\$0.42
Transportation fees	\$0.03	\$0.00	\$0.00	\$0.01
Outfitter, guide	\$1.05	\$0.48	\$0.26	\$0.99
Gambling	\$0.36	\$0.27	\$0.39	\$0.36
Total	\$176.12	\$158.21	\$146.54	\$157.58

The pattern of expenditures following geotourism tendencies does not continue with the vacationer sub-set (Table 14) as the moderate geotravelers spent less than the non-geotravelers. Vacationers spend more in every category of visitors (Table 14).

Table 14: Expenditures of Shoulder and Winter Season Vacationers by Geotraveler Segments

	Strong Geotraveler* (n=109)	Moderate Geotraveler* (n=183)	Non- Geotraveler* (n=58)	Shoulder and Winter Season <u>Vacationers</u> (n= 398)
Gas	\$42.43	\$42.28	\$44.55	\$43.59
Restaurant	\$37.77	\$27.81	\$30.81	\$31.89
Retail	\$30.61	\$24.83	\$31.59	\$29.70
Campgrounds, RV parks	\$1.72	\$2.02	\$1.16	\$1.89
Grocery, snacks	\$16.53	\$18.37	\$5.78	\$15.74
Hotel, motel, B&B,	\$43.58	\$34.35	\$40.43	\$37.54
Auto rental, repair	\$6.22	\$5.03	\$5.27	\$5.37
Licenses, entry fees, admissions	\$8.41	\$5.69	\$7.59	\$7.27
Misc. Services	\$0.82	\$0.44	\$0.69	\$0.65
Transportation fees	--	--	--	--
Outfitter, guide	\$4.73	\$1.17	\$0.86	\$2.46
Gambling	--	\$0.34	\$0.54	\$0.54
Total	\$192.54	\$162.33	\$170.02	\$176.64

Table 15 shows expenditures of quarter 3 vacationers by geotraveler segment. This data follows the pattern mentioned previously. As geotraveler tendency increases, so do expenditures. These expenditures are lower than the shoulder and winter season vacationers but the data in Table 15 is from 2010 making inflation an important factor to consider.

Table 15: Expenditures of Quarter Three Vacationers by Geotraveler Segments

	Q3 Strong Geotraveler (n=100)	Q3 Moderate Geotraveler (n=168)	Q3 Non- Geotraveler (n=42)	All Sampled Q3 Vacationers (n=284)
Gas	\$40.42	\$43.53	\$37.18	\$41.56
Restaurant	\$32.69	\$27.61	\$14.74	\$27.50
Retail	\$19.52	\$15.43	\$16.06	\$16.92
Campgrounds, RV parks	\$12.79	\$18.21	\$19.47	\$16.54
Grocery, snacks	\$13.44	\$11.12	\$10.32	\$11.80
Hotel, motel, B&B,	\$10.97	\$6.95	\$6.48	\$8.26
Auto rental, repair	\$5.62	\$3.63	\$0.00	\$3.79
Licenses, entry fees, admissions	\$2.42	\$1.03	\$1.76	\$1.61
Service	\$0.89	\$1.01	\$0.24	\$0.85
Transportation fees	\$0.88	\$0.52	\$0.00	\$0.67
Outfitter, guide	\$1.05	\$3.20	\$0.00	\$2.01
Rental cabin, condo	\$0.80	\$1.86	\$2.18	\$1.55
Gambling	\$0.30	\$0.00	\$0.72	\$0.21
Total	\$141.79	\$134.10	\$109.15	\$133.27

Conclusions

The shoulder and winter season visitor and vacationer who participated in this study are likely to behave in a geotouristic manner while traveling and that specific attributes of geotourism are important to them while traveling in Montana. As was true in previous studies, vacationers continue to have higher scores on behaviors consistent with geotourism than non-vacationers.

On the travel behavior section of the Geotourism Survey Instrument (GSI), the average score for the full sample was 4.2, while for vacationers it was 4.4. Both of these are on a six point scale with 6 representing perfect agreement with travel behavior related to geotourism and 1 representing travel behavior contradictory to geotourism.

In stating what is most important to them, all respondents felt that clean water and air, scenic vistas, the opportunity to view the night sky, wildlife viewing opportunities, and the amount of open spaces are most important. Montana needs to maintain this destination image in the mind of visitors. In order to accomplish this, the state of Montana must continue to protect its natural resources. If degradation to the travel attributes which make Montana unique occur, the state will begin to lose its competitive advantage as a destination, thus losing a substantial amount of money for the local economy.

Strong geotravelers spent an average of almost thirty dollars more per day while traveling than did non-geotravelers. This shows that visitors who truly embrace the principles of geotourism

while traveling spend more money in an average day than either of the other groups. In this sense, businesses need to continue to market to geotravelers as they can provide a substantial amount of income for Montana's tourism industry.

Literature Cited

Boley, B. B. (2009). *Geotourism In The Crown of The Continent: Developing and Testing The Geotourism Survey Instrument (GSI)*. Missoula, MT: The University of Montana.

Boyle, D. (2010). *Statewide Vacationers to Montana: Are they Geotravelers?*. The Institute for Tourism and Recreation Research. Missoula, MT: The University of Montana.

Stokes, A., Cook, S., & Drew, D. (2003). *Geotourism: The New Trend in Travel*. Travel Industry America and National Geographic Traveler.

Appendix A: Survey Instrument